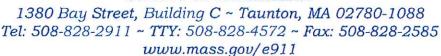


The Commonwealth of Massachusetts EXECUTIVE OFFICE OF PUBLIC SAFETY AND SECURITY

STATE 911 DEPARTMENT





CHARLES D. BAKER Governor

KARYN E. POLITO Lieutenant Governor DANIEL BENNETT
Secretary of Public Safety
and Security

FRANK POZNIAK
Executive Director

August 13, 2015

To the Great and General Court of the Commonwealth of Massachusetts:

On behalf of the State 911 Department (Department), I am pleased to issue our Annual Report for Calendar Year 2014. This Report contains an overview of the enhanced 911 program, and specific information about agency activities during that year as well as the previous Calendar Years 2010 through 2013.

On July 31, 2008, the Legislature passed and the Governor signed into law Chapter 223 of the Acts of 2008 (or Chapter 223) that, amongst other things, changed the name and organizational structure of the agency, which from 1991 up to that date had been known as the Statewide Emergency Telecommunications Board (SETB). The SETB had consisted of a 21-member board and staff, was charged with coordinating and effecting the implementation of enhanced 911 service, and administering such service in the Commonwealth. In its place Chapter 223 created the Department and the State 911 Commission.

The Department is within the Executive Office of Public Safety and Security (EOPSS) and has the authority and responsibility to direct the day to day administration of the statewide enhanced 911 system. It has its own budgetary authority. The Massachusetts statewide enhanced 911 system is one of the largest systems per capita in the United States. A person dialing 911 from anywhere in the Commonwealth is automatically connected to the Public Safety Answering Point (PSAP) handling emergencies in that area. The system provides the phone number and address of the telephone used to make the emergency call (wire-line calls) or the phone number and approximate location of the caller (wireless calls), along with dispatching data for local police, fire and ambulance services. PSAP personnel either dispatch emergency services directly or relay the calls to secondary PSAPs, limited secondary PSAPs, or private or public safety departments.

The State 911 Commission, also within EOPSS, consists of 19 members and is charged with providing strategic oversight and guidance to the Department, and advising the Department relative to its annual budget and all material changes thereto and in all matters regarding enhanced 911 service. The State 911 Commission is also charged with approving all formulas, percentages, guidelines, or other mechanisms used to distribute grants, all major contracts that the Department proposes to enter into for enhanced 911 services, and all regulations and standards proposed by the Department.

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Chapter 223 directed the Department to review and assess new communications technologies that may include, but are not limited to, wireless, video, broadband, and IPenabled applications that may serve as the Next Generation 911 technology platforms, consistent with Federal Communications Commission decisions and federal law. During 2014, the Department progressed in bringing this new Next Generation 911 system to Massachusetts when in August 2014, the Department entered into a contract with General Dynamics Information Technology, Inc. (GDIT) to provide a comprehensive, end-to-end, fully featured, standards-based Next Generation 911 system to replace the current enhanced 911 system. Today, we are limited to what data can be sent with a 911 call and what communication devices can contact 911. Next Generation 911 will ultimately allow for additional data to be sent with the voice 911 call, including telematics crash data, text to 911 with picture and video, and medical records of the caller. In the short term, Next Generation 911 will allow for texting to 911 without picture and video. Text to 911 is a critical need for the deaf, hard of hearing and speech impaired. There are many other benefits of a Next Generation 911 system, such as an enhanced mapping system, faster call setup time, and improved monitoring and reporting capabilities, which are more fully described in this Annual Report.

We expect this new system to be implemented in Massachusetts by the end of 2016. We are excited about its introduction in Massachusetts, which will benefit our citizens.

Sincerely,

FRANK POZNIAK

Executive Director

The 2014 State 911 Commission members were:

Andrea Cabral, Secretary (Chair)
Executive Office of Public Safety and Security

William Oates, Chief Information Officer Information Technology Division

Stephen Coan, State Fire Marshal Department of Fire Services

Timothy Alben, Superintendent Department of State Police

William Evans, Police Commissioner City of Boston

Myra Berloff, Director Massachusetts Office on Disability

Heidi Reed, Commissioner Commission for Deaf/ Hard of Hearing

Cheryl Bartlett, Commissioner Lauren Smith, Interim Commissioner Eileen Sullivan, Acting Commissioner Department of Public Health

Richard Stillman, Police Chief Town of Walpole Massachusetts Chiefs of Police Association

Kevin Coppinger, Police Chief City of Lynn Major City Police Chiefs Association

Gerald Dio, Fire Chief
City of Worcester
Massachusetts Fire Chiefs Association

Robert Silvia, Fire Chief Town of Cohasset Massachusetts Fire Chiefs Association Peter Thomas, Deputy Superintendent (Vice-Chair) Barnstable County Sheriff's Office Emergency Medical Care Advisory Board

Doug Mellis, Police Chief Town of East Longmeadow Massachusetts Police Association

Ralph Dowling, Captain, Boston Fire Department City of Boston Professional Fire Fighters of Massachusetts

Vacant
Massachusetts Communications Supervisors Association

James Boudreau, Town Manager Town of Norwell Massachusetts Municipal Association

James Cummings, Sheriff Barnstable County Sheriff Massachusetts Sheriffs Association

Patrick Sean Tyler
Fallon Emergency Medical Services, Inc., President
Fallon Ambulance Service, Executive Vice-President and Chief Operating Officer
Massachusetts Ambulance Association

Employees – 2014:

Frank Pozniak (Executive Director); Thomas Ashe (Deputy Executive Director); Louise McCarthy (Administrative Attorney); Elaine Ginn (Executive Assistant); Karen Robitaille (Fiscal Director); Michelle Hallahan (Fiscal Specialist); Karen Mullin (Fiscal Coordinator); Vicky Goetz (Accountant II); Marilyn Godfrey (Grant Specialist); Normand Fournier II (9-1-1 Systems Director); Jack DiPesa and Joe Hickey (Systems Analysts); Christine Wingfield (Regional PSAP Coordinator); Jeff Jeffers (Project Coordinator); Monna Wallace (Programs Director); Grant Harrison (Equipment Distribution Program (EDP) Manager); Venus Wheeler and Cathy Rodriguez (Program Assistants); Ronnie Zuniga (Public Education Coordinator); Juanita Bracero, Wallace Smith, Kristen Vaidya, John Brunelli, and Kevin Lewis (Enhanced 911 Trainers); Sheila Foley and Christine Molloy (Part-Time Enhanced 911 Trainers); Christine O'Reilly, Ashley Landis, and Linda Mazzolla (Part-Time TTY Quality Assurance Team); Melanie DaRosa, Christopher Hartling, Christopher Murphy, Christopher Plant, Glen Schultz, and Marguerite Szczawinski (EDP Field Advisors); and Janice Barrette, Paul Gambina, Brian Hall, Anne Ouellette, Al Gomes, and Al Terminiello (EDP Customer Representatives).

OVERVIEW

Since 1991, the SETB, and now the Department, has implemented and managed wire-line and wireless enhanced 911 service for all 351 municipalities in the Commonwealth. These services are provided through PSAPs, which by the end of 2014 totaled 249 in the Commonwealth. The Department directly provides network, database, customer premises equipment (CPE), maintenance, training and support services, and grant funding to the PSAPs. Pursuant to the contract it entered in to with General Dynamics Information Technology, Inc. in August 2014, the Department has begun the project to deploy a Next Generation 911 system in the Commonwealth.

The Department has established technical and operational standards to ensure accurate and timely responses to enhanced 911 calls, and has trained thousands of dispatchers and call-takers in the correct method of answering enhanced 911 calls. In late 2006, the PSAP training fund grant was established to reimburse PSAPs for a portion of their training costs. In 2008, pursuant to Chapter 223 of the Acts of that year, the Department expanded its grant programs to provide personnel and equipment support to PSAPs, including a wireless Massachusetts State Police (MSP) grant for such support to the MSP's Framingham, Middleboro and Northampton wireless PSAPs, and to encourage regionalization of the PSAPs. These grant programs were in effect in 2010 through 2014. An additional wireless center was established at the Essex County Sheriff's Department in Middleton in 2013 to handle the increased volume in wireless 911 calls in the Commonwealth.

Finally, the Department continued with the administration of the Disability Access Program that provides telecommunication relay service, captioned telephone relay service, and specialized customer premises equipment distribution service to the Commonwealth's disabled community.

FUNDING

The Department's budget in Fiscal Year (FY) 2014 (July 1, 2013 – June 30, 2014) was funded from the Enhanced 911 Fund, which was established by Chapter 223 of the Acts of 2008. This Fund was supported by the surcharge assessed on subscribers of wire-line, wireless service, including pre-paid wireless, and VoIP.

The Department's budget for FY 2014 (\$71,592,010) funded the administrative costs of the agency (\$5,164,058); programs, including the grant program (\$30,373,546); enhanced 911 services (\$33,276,869); and disability access programs (\$2,778,338).

The Department's budget for FY 2013 (\$73,318,472) funded the administrative costs of the agency (\$4,557,096); programs, including the grant program (\$35,704,148); enhanced 911 services (\$29,872,177); and disability access programs (\$3,185,051). For FY 2012, the Department's budget (\$69,560,637) funded the administrative costs of the agency (\$4,297,246); programs, including the grant program (\$37,182,710); enhanced 911 services (\$24,524,229); and disability access programs (\$3,556,452). The Department's budget for FY 2011 (\$59,752,655) funded the administrative costs of the agency (\$4,530,959); programs, including the grant program (\$28,248,888); enhanced 911 services (\$22,917,085); and disability access programs (\$4,055,722). Finally, the Department's budget for FY 2010 (\$55,659,210) funded the administrative costs of the agency (\$5,095,639); programs, including the grant program (\$24,395,214); enhanced 911 services (\$21,480,543); and disability access programs (\$4,687,814).

ACCOMPLISHMENTS

The following outlines the major accomplishments in Calendar Year 2014, as well as Calendar Years 2010 through 2013.

Next Generation 911

On August 4, 2014, the Department entered into a contract with General Dynamics Information Technology, Inc. to provide a comprehensive, end-to-end, fully featured, standards-based Next Generation 911 system to replace the current enhanced 911 system. The current enhanced 911 system is an analog-based system that was designed in the 1960s. The system has been successful in delivering 911 services for many years. However, the types of analog services that are imbedded in the existing system are becoming obsolete and are being discontinued throughout the country. Technological advancements have created the necessity for a more advanced system that will offer capabilities (e.g., text and video messaging) that simply do not exist using today's system. Throughout the nation, enhanced 911 systems are being overhauled and replaced with new and emerging technologies. This need was recognized by the Legislature with the passage of Chapter 223 of the Acts of 2008, and, therefore, in accordance with this law, it is necessary to replace the existing system with one that uses advanced communications technologies in the infrastructure itself.

In accordance with Chapter 223, the Department embarked upon a project to review and assess communications technologies that could serve as the basis for a new platform. In 2009, following a competitive procurement process, the Department retained outside consultants to assist with the effort to review and assess the technical, financial, and operational requirements and other matters that would facilitate the migration to a new system. The outside consultants were tasked with reviewing the existing customer premises equipment (CPE) with the intent of migrating to an IP-based system; analyzing technical requirements; examining possible network facilities; investigating geographic information system (GIS) requirements and capabilities; and developing system architecture and migration plans. The outside consultants were also charged with undertaking a financial analysis that included gathering pertinent information related to technology availability, funding parameters, and governance matters; gathering information on practices elsewhere in the United States related to ownership, funding, and governance; gathering data from the vendor community related to technology roll out timeframes and costs; and synthesizing this information so that the Department could assess the financial components of the migration to a new system.

Throughout 2009 and 2010, the Department, working in consultation with the outside consultants and representatives from other agencies, continued its analysis and assessment of the issues associated with the migration to a new system, including a review of evolving national standards. In 2009, the Department hosted a series of Next Generation 911 presentations at the Department's offices. In 2010, the State 911 Commission authorized the Department to form a Strategic Sourcing Team (SST) for the purpose of conducting the solicitation for and the procurement of a Next Generation 911 system and associated matters.

In 2011, the National Emergency Number Association (NENA) produced a number of Next Generation 911 Standards and other documents, recommendations, and policy briefs regarding the transition to Next Generation 911. In addition to the development of technical and operational standards, NENA engaged in proof of concept trials and demonstrations of the new technology. However, a standards-based Next Generation 911 system was not fully identifiable, and further clarification was necessary.

In 2012, the Department issued a Request for Information (RFI) to assist the Department in identifying various solutions and gathering any information to help the Department assess the capabilities of a Next Generation 911 environment, including all aspects of network, database, geobased routing, caller location information, applications and appliances, call taking solutions, CPE, support services, maintenance and monitoring, and any other functional element required to meet the acceptance, processing, and delivery of current and anticipated Next Generation 911 payloads. Respondents to the RFI provided the Department with information about their Next Generation 911 technologies and any alternative capabilities for IP-based call and payload handling.

Following the lengthy and exhaustive efforts set forth above, the Department sought to procure goods and services through a competitive procurement conducted pursuant to 801 CMR 21.00: Procurement of Commodities and Services.

As authorized by the State 911 Commission, the Department formed an SST for the purpose of conducting the solicitation for and the procurement of a Next Generation 911 system and associated matters. The SST was comprised of members of the Department, the State 911 Commission, and key stakeholders with the required skills and knowledge to assist in the development of a Request for Response (RFR) and analysis of bid responses.

On October 4, 2013, the Department issued an RFR seeking to procure the services to design, equip, install, operate, monitor, maintain, train, and support a Next Generation 911 system throughout the Commonwealth in a turnkey fashion. The RFR provides that the acquisition method for the contract is fee for service. The contract duration is five (5) years, with one (1) option to renew for a period of five (5) years. The RFR provides that the system shall be fully operational throughout the Commonwealth no later than June 30, 2016. Multiple responses were received.

The SST was assigned the task of analyzing the merits of the proposals submitted. The evaluation process consisted of a review of the written responses, references/financial stability statements, interviews/demonstrations, pricing, and a site visit from which the highest scoring bidder proposed to operate its help desk and network operations center. The SST provided all bidders with the opportunity to provide a Best and Final Offer.

The evaluation process concluded in July 2014, and the Department selected a bidder who offered the overall best value to the Commonwealth. At a meeting held on August 4, 2014, the State 911 Commission authorized the Department to enter into a contract with the winning bidder, General Dynamics Information Technology, Inc. Accordingly, a contract for Next Generation 911 products and services was executed with GDIT on August 4, 2014.

The benefits of a Next Generation 911 system are significant. By using an IP-based system, 911 system capabilities are greatly enhanced not only from the call taker's perspective but also from a reliability standpoint. Over the years, wireline carriers have been investing mostly in their IP infrastructure and barely maintaining their legacy systems ultimately leading to reduced reliability in

the analog components. Due to the nature of IP, call setup times over the Next Generation 911 system will be much improved over the current enhanced 911system, saving seconds between the time someone dials 911 and when a call taker hears ringing.

Additional information capabilities are inherent to Next Generation 911. Today, we are limited to what data can be sent with a 911 call. Using Next Generation 911 will ultimately allow for additional data to be sent with the voice call, including telematics crash data, text to 911 with picture and video, medical records of the caller, etc. In the short term, Next Generation 911 will allow for texting to 911 without picture and video. Text to 911 is a critical need for the deaf, hard of hearing and speech impaired. Currently, the only way for those constituents to contact 911 directly is by using a text telephone (TTY) device. TTY is an archaic means of communication and has mostly been abandoned in exchange for using text to communicate. Texting will also allow for communication with a PSAP in a situation where the person is fearful for his or her life but is unable to convey that information verbally (e.g., active shooter, domestic violence, home invasion, etc.).

Improved PSAP capabilities allow for more efficient PSAP management. For instance, with Next Generation 911, a PSAP may send telecommunicators to neighboring PSAPs during a major event for call overflow management. Simply by logging into a position at a different PSAP, that call taker can receive calls destined for his or her home PSAP without any intervention by the 911 service provider or the State 911 Department. By logging in remotely, the PSAP is creating a larger virtual PSAP during a crisis. In addition, because the Next Generation 911 system is IP based, it allows for faster call setup time reducing the time it takes for a 911 call to start ringing at the PSAP, and remote monitoring capabilities give the Department greater system management capabilities.

The telecommunicators at the PSAPs will benefit from a much enhanced mapping system that will not only provide property parcel data information to pinpoint the location of a caller, but will also show roof outlines of structures on the property. A secondary tab on the mapping system will provide the telecommunicators with an aerial view providing information regarding obstacles or hazards in the area.

The PSAPs will have more flexibility in how they manage their speed dials. Today, PSAPs must route all changes through the Department and then wait for the 911 service provider to implement them. The new system will allow for PSAPs to manage their own speed dials instantly. Part of the reason it can take up to two days to get a speed dial changed today is due to the fact the 911 service provider uses dial up connections to make the configuration changes remotely. The Next Generation 911 system will be confiected via high speed links for monitoring and maintenance.

While the physical footprint of the backroom equipment is similar to what the legacy system has, there are far fewer servers in the equipment cabinet resulting in fewer HVAC requirements, less power consumption, and less noise. The computer at each call taking position in a PSAP is small form factor taking up less space in the console furniture. However, the larger liquid crystal display screens make it easier to see the data on the displays.

Finally, the State 911 Department will benefit from statewide reporting for improved oversight. Reporting data, such as call volume, call answer time, and average busy hour, will be made available remotely.

Service Provider Contract

In 2013, the Department successfully negotiated and procured a multiyear contract with Verizon to equip, install, monitor, maintain, provide training, and support the enhanced 911 system throughout the Commonwealth. This contract will remain in place as the Department transitions the Commonwealth to the new Next Generation 911 system. Verizon is contracted to provide support services for integrated network services, voice and automatic location identification and automatic number identification data transfer capability for each PSAP, and to provide and maintain the CPE at the PSAPs.

Grant Program

Pursuant to Chapter 223 of the Acts of 2008, the Department expanded its grant program to support the PSAPs in the Commonwealth and to develop and encourage the creation of regional PSAPs and Regional Emergency Communication Centers (RECCs) throughout the Commonwealth. A description of each of these grant programs is contained below.

- PSAP and Regional Emergency Communication Center Training Grant: Reimburses
 primary, regional and regional secondary PSAPs and RECCs for allowable expenses
 related to the training and certification of enhanced 911 telecommunicators.
- Public Safety Answering Point and Regional Emergency Communication Center Support and Incentive Grant: Provides funding to primary, regional and regional secondary PSAPs and RECCs for allowable expenses related to enhanced 911 personnel and equipment costs. Incentive funds are awarded in addition to amounts allocated as part of the Support Grant using a formula that applies a specified percent of total surcharge revenues based on number of municipalities to be served by regional PSAPs or RECCs.
- Wireless State Police Public Safety Answering Point Grant: Reimburses wireless MSP PSAPs for allowable expenses related to enhanced 911 personnel and equipment costs.
- Regional and Regional Secondary Public Safety Answering Point, and Regional Emergency Communication Center Development Grant: Supports the development and startup of regional PSAPs, regional secondary PSAPs and RECCs, including the expansion or upgrade of existing regional and regional secondary PSAPs, and RECCs, to maximize effective emergency 911 and dispatch services as well as regional interoperability.

Chapter 223 permits the Department to introduce new grants associated with providing enhanced 911 services in the Commonwealth. In order to support the PSAPs in meeting new training requirements described below, the Department introduced a new grant in 2011, the Emergency Medical Dispatch (EMD) Grant. The EMD Grant was approved by the State 911 Commission, and then by the Department of Telecommunications and Cable by Order dated May 27, 2011, and was renamed the EMD/Regulatory Compliance Grant in 2013.

The amount awarded to each grant in each year for Fiscal Years 2010 through 2014 is contained below.

	FY10	FY11	FY12	FY13	FY14	Total by Program
Training Grant	\$ 2,568,532	\$ 2,932,674	\$ 4,263,699	\$ 4,768,476	\$ 4,830,000	\$ 19,363,381
EMD Grant	N/A	N/A	\$ 2,419,490	\$ 2,070,000	\$ 2,070,000	\$ 6,559,490
Support & Incentive	\$ 18,988,197	\$ 21,312,851	\$ 21,362,809	\$ 22,478,213	\$ 23,468,799	\$ 107,610,869
Wireless MSP	\$ 2,511,060	\$ 3,694,707	\$ 3,922,569	\$ 3,933,000	\$ 3,933,000	\$ 17,99 4,336
Development	\$ 7,958,962	\$ 12,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 43,958,962
Total By FY	\$ 32,026,751	\$ 39,940,232	\$ 39,968,567	\$ 41,249,689	\$ 42,301,799	
Total By FY	\$ 32,026,751	\$ 39,940,232	\$ 39,968,567	\$ 41,249,689	\$ 42,301,799	No.
	0					\$ 195,487,038

Regionalization

Since the passage of Chapter 223 of the Acts of 2008 that established a grant program to encourage regionalization of the PSAPs in the Commonwealth, 11 regional PSAPs have been added to the mix of PSAPs providing 911 services to the Commonwealth's municipalities. In total, by the end of 2014, there were 22 regional 911 centers, consisting of 5 regional PSAPs and 17 RECCs. These 22 regional centers answer 911 calls for 129 municipalities across the Commonwealth. The Department continues with its efforts to provide more and better incentives to achieve further regionalization of the many PSAPs in Massachusetts to enhance public safety and maximize interoperability while at the same time achieving costs savings where possible.

Training and Emergency Medical Dispatch

Chapter 223 of the Acts of 2008 directed the Department to establish, with the State 911 Commission's approval, certification requirements for enhanced 911 telecommunicators that include EMD and quality assurance of EMD programs. —

Effective July 1, 2012, the Department promulgated 560 CMR 5.00: State 911 Department Regulations Establishing Certification Requirements for Enhanced 911 Telecommunicators, Governing Emergency Medical Dispatch, and Establishing 911 Call Handling Procedures (EMD regulations). The EMD regulations impose certification requirements in order for a person to act as an enhanced 911 telecommunicator. These regulations require the successful completion of a minimum of two (2) days of 911 equipment and basic telecommunicator training offered by the Department and successful completion of a minimum of forty (40) hours of Department-approved basic telecommunicator training (or the equivalent). In order to maintain certification as an enhanced 911 telecommunicator, it is necessary to successfully complete thereafter a minimum of sixteen (16) hours of Department-approved continuing education annually (or the equivalent). In addition, the EMD regulations impose requirements for PSAPs to provide EMD services either through certified emergency medical dispatchers or by arranging for EMD to be provided through a certified EMD resource. The EMD regulations require that, in order to act as a certified emergency

medical dispatcher for a PSAP an individual shall: obtain and maintain certification as an enhanced 911 telecommunicator; obtain and maintain CPR certification, and obtain and maintain certification in EMD through an EMD certification organization approved by the Department. The EMD regulations require that, in order to act as a certified EMD resource, the entity shall submit a request for approval that shall include the EMD protocol and documentation that each emergency medical dispatcher is certified.

The training is managed by the PSAPs, and the courses vary. The Department maintains a listing of eligible courses that are supported by the Training Grant program, which supports approximately five thousand (5,000) enhanced 911 telecommunicators. The EMD regulations require that all certified enhanced 911 telecommunicators complete sixteen (16) hours of continuing education annually. Further, the EMD regulations require newly hired enhanced 911 telecommunicators to complete a minimum of two (2) days of 911 equipment and basic training and to complete and a minimum of forty (40) hours of Department-approved basic telecommunicator training, plus certification in EMD (either twenty-four (24) hours or thirty-two (32) hours of training depending on the course vendor) and cardiopulmonary resuscitation (CPR) (a four (4) hour course) if providing EMD in house.

Essex County Sheriff Wireless Center

In 2013, the Essex County Sheriff Wireless Center (Wireless Center) was established within the same facility as the Essex County Sheriff RECC (Essex RECC) for the purpose of receiving wireless 911 calls assigned to it by the Department and, as appropriate, relaying emergency 911 calls to public or private safety departments or PSAPs. The Wireless Center has been assigned the responsibility of receiving all wireless 911 calls from Emergency Service Number 601, which includes all of Essex County and a portion of Middlesex County. The creation of a designated Wireless Center within the Essex RECC facility relieves the MSP wireless PSAPs from receiving a portion of the wireless 911 calls currently routed to the MSP wireless PSAPs, allows for wireless 911 calls to be routed to a facility with particular expertise in the handling of wireless 911 calls, and allows for the use of the building that houses the Essex RECC to greater capacity.